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(54) **MODIFIED PRINTED DIPOLE ANTENNAS
FOR WIRELESS MULTI-BAND
COMMUNICATION SYSTEMS**

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See application file for complete search history.

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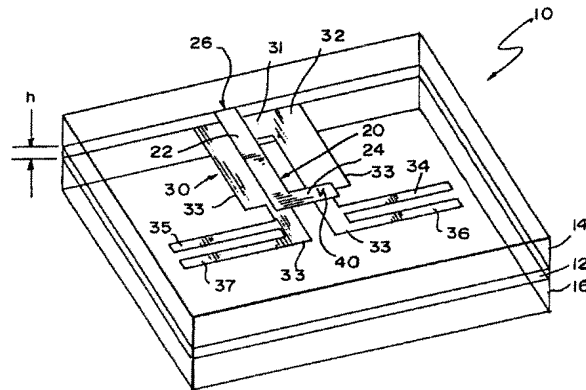
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(57) **ABSTRACT**

A dipole antenna for a wireless communication device, which includes a first conductive element superimposed on a portion of and separated from a second conductive element by a first dielectric layer. A first conductive via connects the first and second conductive elements through the first dielectric layer. The second conductive element is generally U-shaped. The second conductive element includes a plurality of spaced conductive strips extending transverse from adjacent ends of the legs of the U-shape. Each strip is dimensioned for a different center frequency λ_0 . The first conductive element may be L-shaped, and one of the legs of the L-shape being superimposed on one of the legs of the U-shape. The first conductive via connects the other leg of the L-shape to the other leg of the U-shape.

19 Claims, 15 Drawing Sheets



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